CHAPTER 2
FUNDAMENTAL NOTATION

NOTATION OF PITCH

Pitch Nomenclature

Each line and space of the great staff (Figure 2.1) has a letter-name. In ascending order, the lines and spaces are named from *A* through *G*. After *G*, the seven-letter series repeats. A note placed on the staff takes the name of the line or space on which it is placed.

The *great staff* is a theoretical construction consisting of eleven lines and ten spaces with middle *C* as the middle or sixth line.

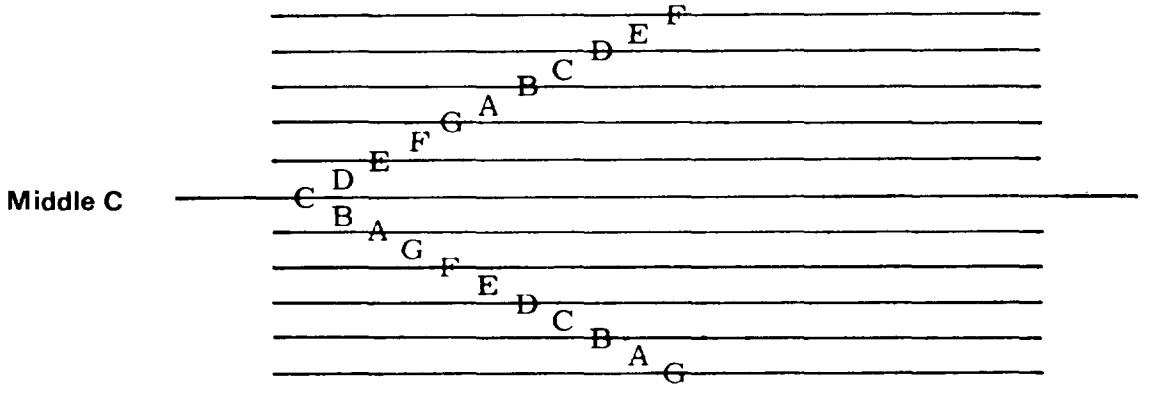


Figure 2.1: Great Staff.

The great staff is not used for the notation of music. Instead, a five-line staff is used. A symbol (clef sign) must be used to indicate which five lines of the great staff are to be used for the notation of pitch.

G, C, *and* F *Clefs*

The lower loop of the G clef sign encircles *G* above middle *C*.

Converging arms of the C clef sign designate middle *C*.

The two dots of the F clef sign designate the line passing between them as *F* below middle *C*.

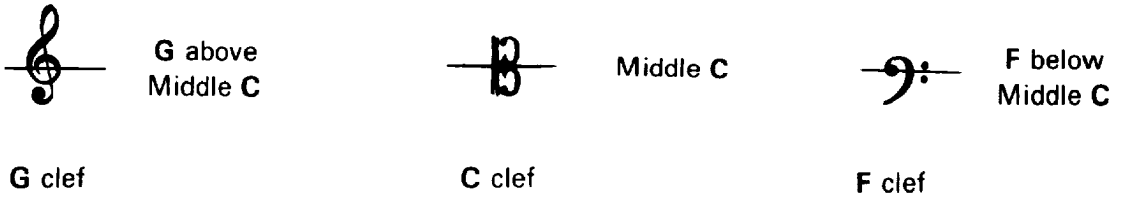


Figure 2.2: G, C, *and* F *Clefs.*

Figure 2.3: G, C, *and* F *Clefs on the Great Staff.*

Grand Staff/Treble and Bass Clefs

G clef is most commonly used to place *G* on the second line of a five-line staff. This clef is known as *treble clef.*

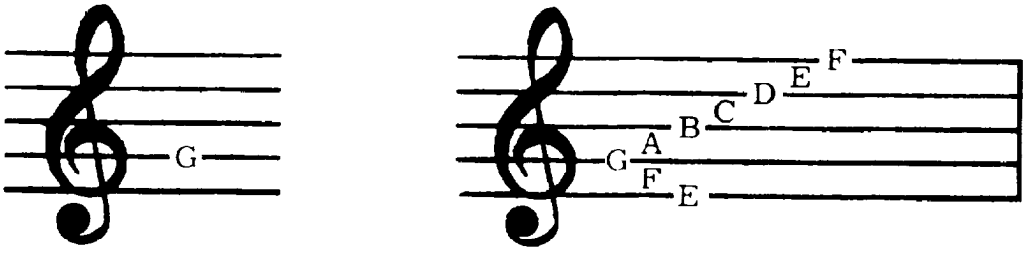


Figure 2.4: Treble Clef.

F clef is most commonly used to place *F* on the fourth line of a five-line staff. This clef is known as *bass clef.*

Figure 2.5: Bass Clef.

The treble and bass clefs, joined together, form the *grand staff* which is commonly used in keyboard music and scoring.

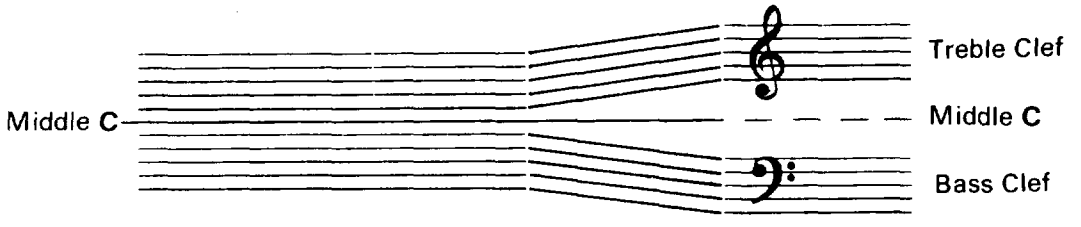


Figure 2.6: The Relationship between the Great Staff and Grand Staff.

Leger Lines

It is frequently necessary to write pitches above or below a five-line or grand staff. These temporary extensions above or below the staff are *leger lines.*

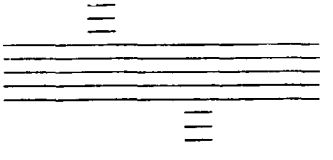


Figure 2.7: Leger Lines.

Keyboard

The keyboard may be used as a visual demonstrator for pitch relationships. Keyboard pitch nomenclature is similar to staff pitch nomenclature (Figure 2.8).

Note that the *black keys* are found in groups of two and three. Immediately to the left of each group of two black keys is found the pitch *C*. When ascending on the keyboard, the pitch names *A* through *G* are used, beginning again with the letter name *A* at the completion of the series.

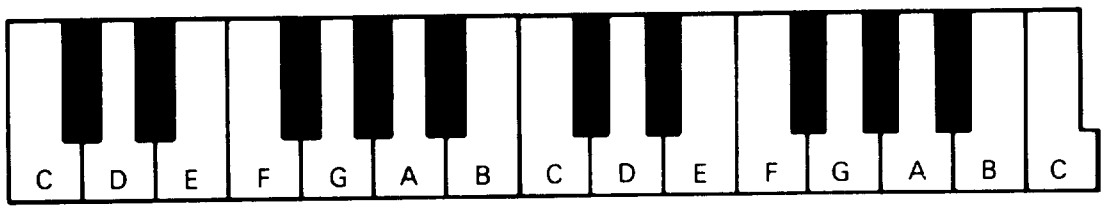


Figure 2.8: Keyboard.

Chromatic Signs

Pitches occurring 'between' letter names cannot be represented by letter names alone. Additional symbols are required for proper identification. These symbols, known as *chromatic signs,* are five in number.

Sharp	♯	Raises the pitch of the letter name a half step
Flat	♭	Lowers the pitch of the letter name a half step.
Double sharp	𝄪	Raises the pitch of the letter name two half steps.
Double Flat	𝄫	Lowers the pitch of the letter name two half steps.
Natural	♮	Cancels a previously used chromatic sign (including 𝄪 and 𝄫).

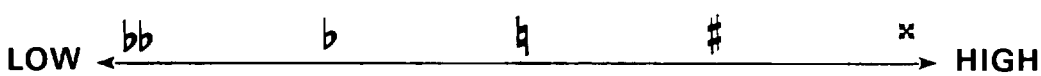
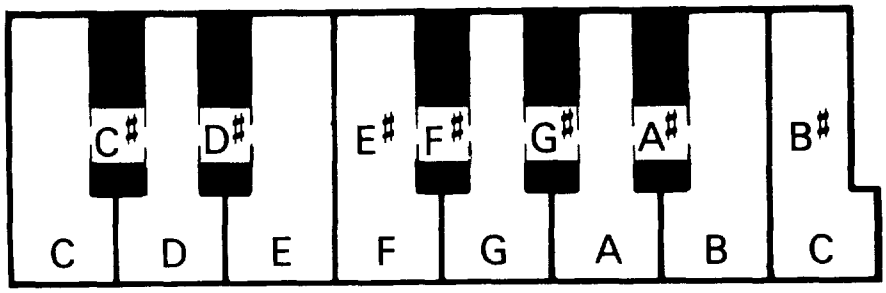
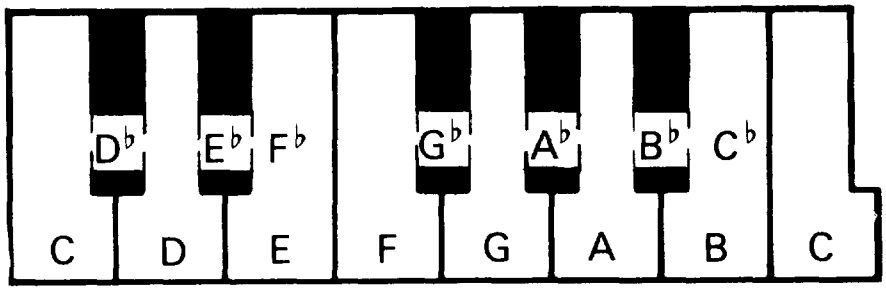


Figure 2.9: Chromatic Signs.

Any two adjacent keys on the keyboard sound a *half step* or *semitone* apart. When expressing the pitches occurring 'between' the letter names as sharps or flats, the pitches are expressed as *chromatic alterations* of the letter names.



Sharp Alterations



Flat Alterations

Figure 2.10: Chromatic Pitch Names.

Enharmonic Pitches

A single pitch may have more than one name. Pitches that have different names but sound the same are *enharmonic pitches.*

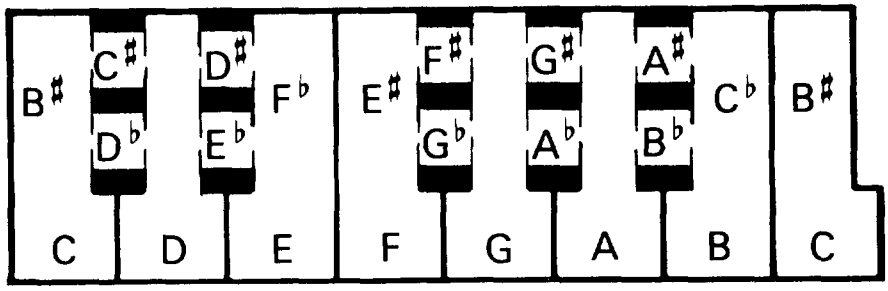


Figure 2.11: Enharmonic Pitches.

Adding double sharps and double flats increases the number of enharmonic pitches.

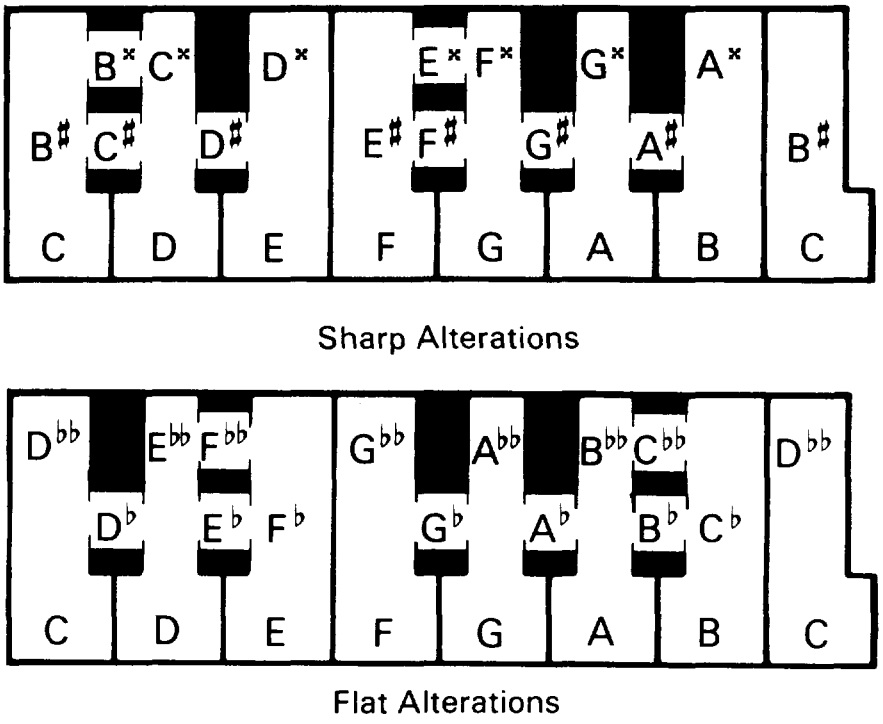


Figure 2.12: Enharmonic Pitches with Double Sharps and Double Flats.

Pitch Nomenclature in the Great Staff

Octave designators must be used to distinguish between identical pitch names in different octaves. This is one way a pitch may be represented precisely without staff notation or reference to the keyboard. Middle *C is* $\mathbf{c}^1$, the center line of the great staff and the imaginary line between treble and bass clefs in the grand staff. Middle *C* or $\mathbf{c}^1$ is the *C* closest to the center of the standard piano keyboard.

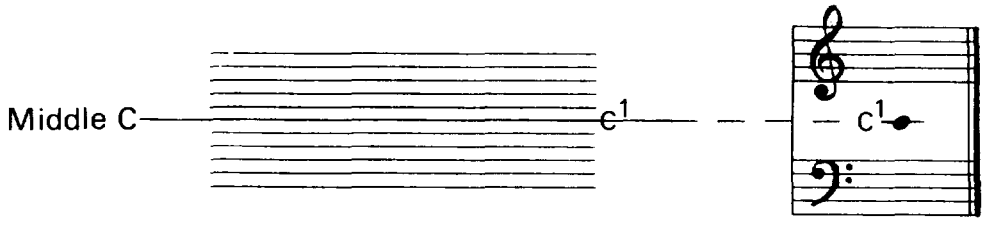


Figure 2.13: $\mathbf{c}^1$ *in Great and Grand Staves.*

From C^{bb} immediately below c^1 to B^{x} above c^1, all pitches spelled within the octave are designated *first octave* and are identified by lower case letters and the number 1.

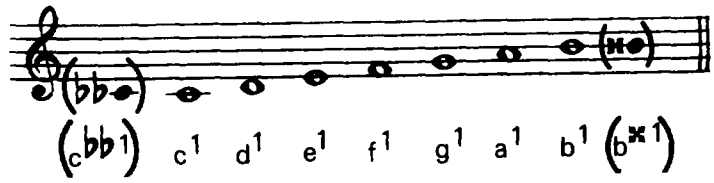


Figure 2.14: First Octave.

The octave immediately above the first octave is designated *second octave* and is identified by lower case letters and the number 2.

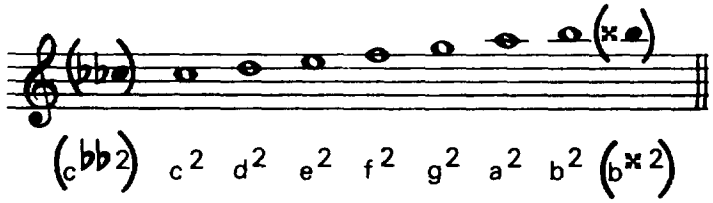


Figure 2.15: Second Octave.

The octaves are numbered consecutively in higher octaves including a *third octave* and *fourth octave*. The highest pitch on the piano keyboard is c^5.

The octave immediately below the first octave is designated *small octave* and is identified by lower case letters.

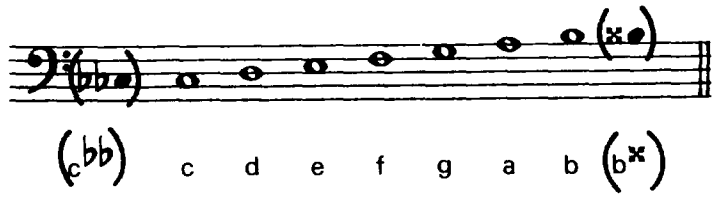


Figure 2.16: Small Octave.

The octave immediately below the small octave is designated *Great Octave* and is identified by capital letters. Below the Great Octave is the *Contra Octave* where pitches are identified by two capital letters (**BB♭** or **AA♯**) **and the** *Subcontra Octave* where pitches are identified by three capital letters (**BBB♭**). The lowest note on the piano keyboard is Subcontra *A* (**AAA**).

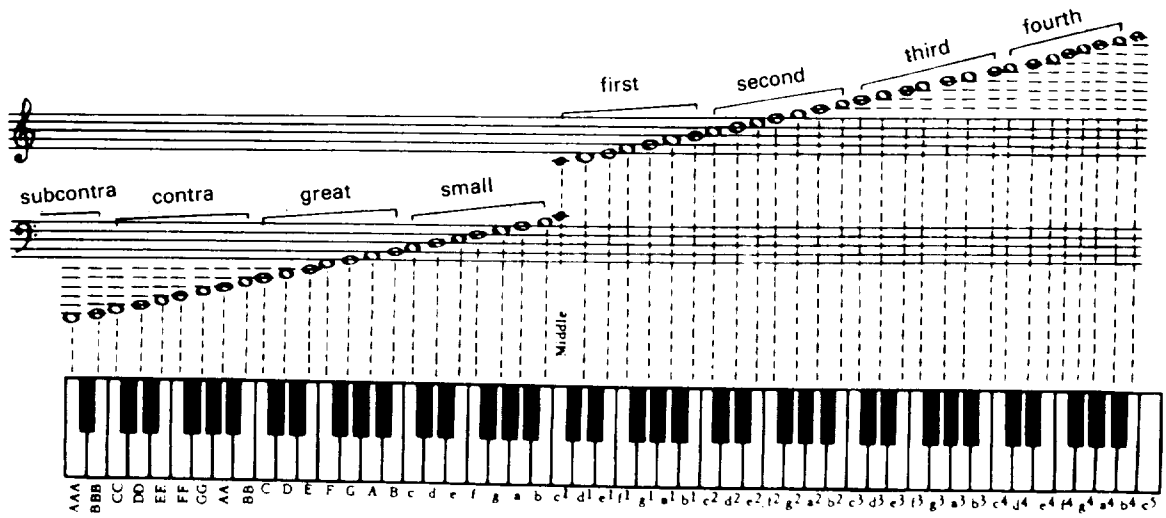


Figure 2.17: Grand Staff and Keyboard Pitch Nomenclature.

Single-Staff Clefs

Treble and bass clefs are used more frequently than any other five-line clefs, but other clefs are used. Their ranges have developed from the need to bring a specific range within the compass of the staff.

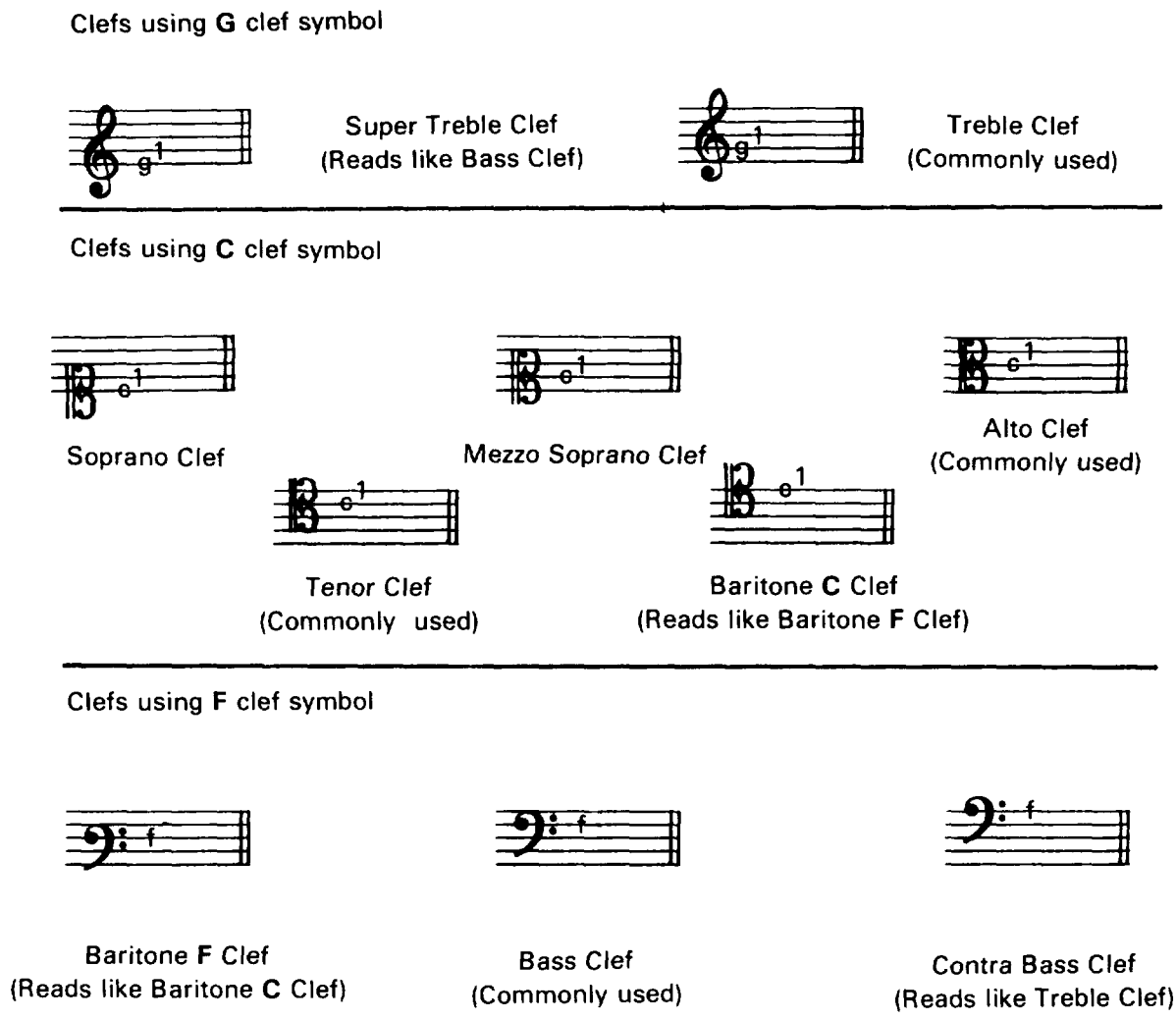
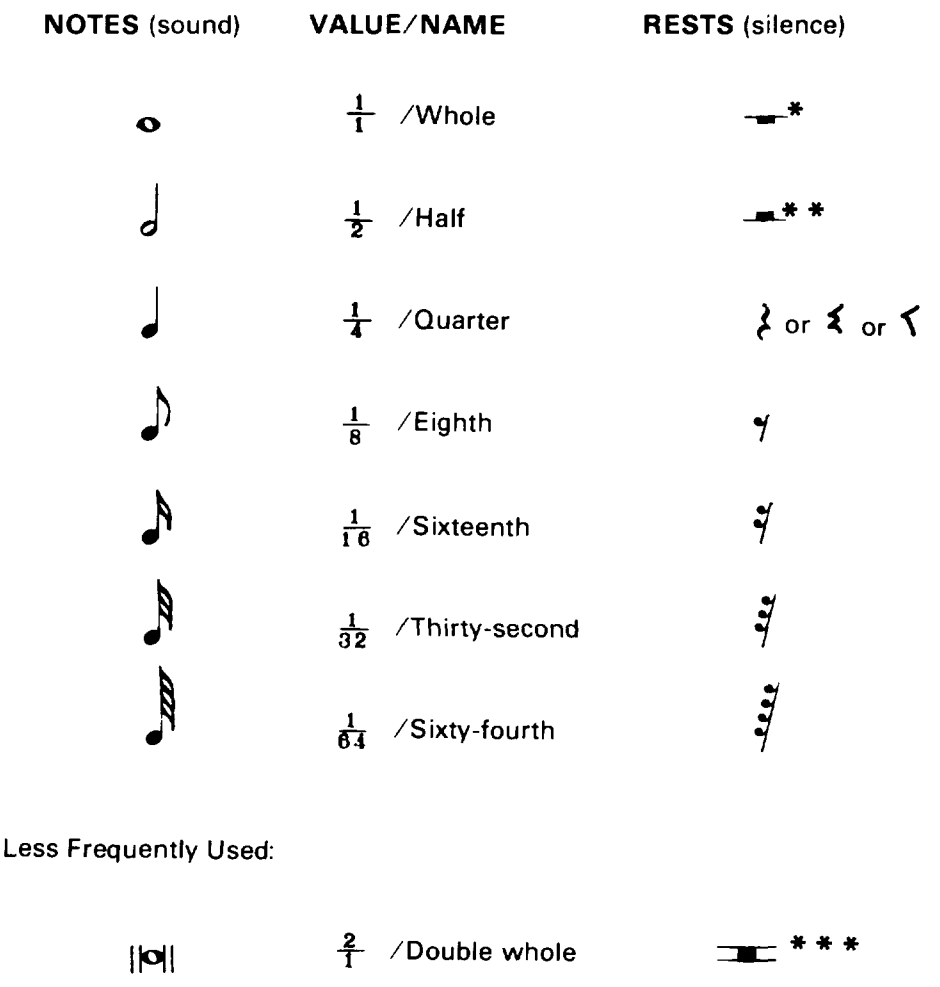


Figure 2.18: Single-Staff Clefs.

NOTATION OF DURATION

Note and Rest Values

Duration of sound is the building block for the creation of rhythm. Rhythm is composed of two elements: *sound* and *silence*. Notational symbols for sounds are called *notes*. Notational symbols for silences are called *rests*. Each note value and symbol has a corresponding rest value and symbol. These values are expressed arithmetically as fractions. The symbols have characteristics in common and are generally a single notational alteration from an adjacent value.



*Hangs from fourth line.

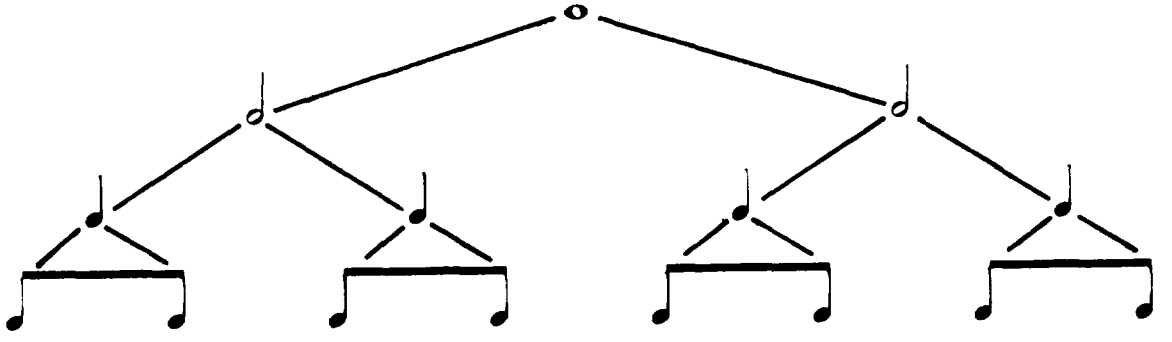
**Sits on third line.

***Fills space between third and fourth lines.

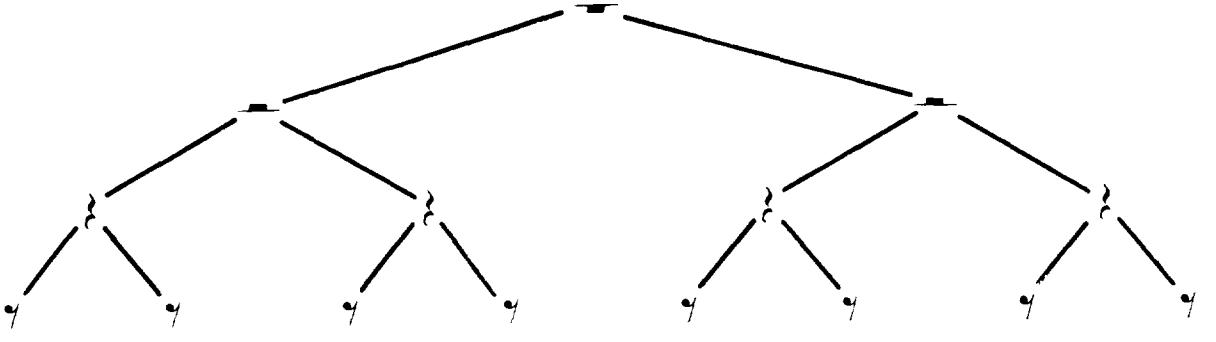
Figure 2.19: Note and Rest Values and Symbols.

Notes and rests indicate the creation of sound and silence to form rhythm. When specific pitches are desired, they are placed in a given clef to indicate the pitch.

Note and rest symbols do not indicate actual duration of time until tempo and metric grouping are indicated. They do indicate relative duration as expressed by fractional names. A given note or rest value is equal in duration to two notes or rests of the next smaller value.



Note Equivalents



Rest Equivalents

Figure 2.20: Note and Rest Equivalents.

Tied Notes

Since only multiples of two are possible with basic note and rest symbols, devices are used to extend duration. One symbol used to extend the duration of a note is the tie. A *tie* is a curved line joining two or more successive notes of

identical pitch. Tied notes sound as one note. Ties are not used with rests because rest values are cumulative.

Figure 2.21: Tied Notes.

Dotted Notes and Rests

Another symbol used to extend the duration of a note or rest is the dot. A *dot* placed after a note or rest increases duration by one half the original value. A dotted note or rest has a value equal to three of the next smaller value.

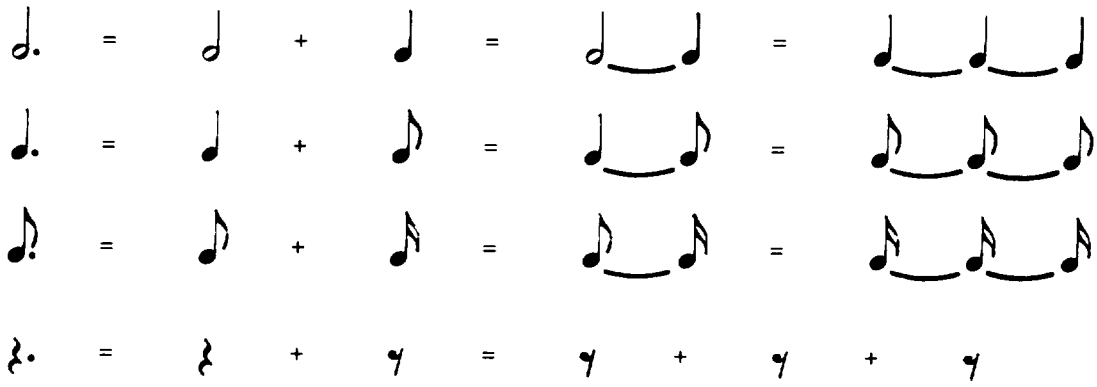


Figure 2.22: Dotted Notes and Rests.

Note and rest duration may be further increased by additional dots placed after the original dot. Each additional dot increases the duration of the note or rest by one half the value of the previous dot.

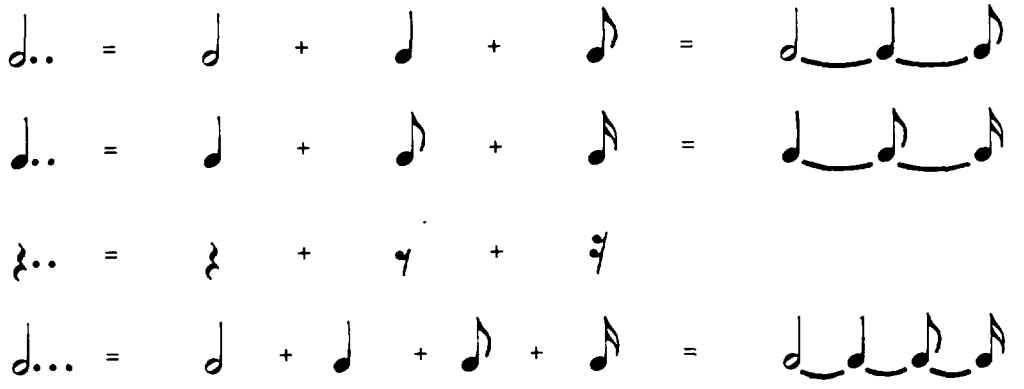


Figure 2.23: Multiple Dotted Notes.